



QUAPIL et al.

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*Amendments*

***In the Claims:***

Please amend claims 1, 7, 10, and 17-19 as follows:

1. (Amended) A device for analyzing immunoassays with a liquid assay medium, comprising:

a vessel for holding the assay medium, the vessel having a base comprised of a solid body, the solid body having a first side wall and a top surface constituting a bottom surface of the vessel and forming a boundary surface of the solid body, wherein first reaction agents are dissolved in the assay medium in the vessel and are labeled with a luminophore or different luminophores and second reaction agents are bonded to the boundary surface within a boundary layer of the assay medium;

a transmitter for emitting light rays that are coupled into the base of the vessel via the first side wall and conducted at a total reflection angle to the boundary surface so that luminophore-labeled first reaction agents that are bonded to the second reaction agents are optically excited by at least some of the light rays and emit at least one of fluorescent and phosphorescent rays; and

a receiver positioned for quantitatively detecting the at least one of the fluorescent rays and phosphorescent rays.

7. (Amended) The device according to claim 5, wherein the attachment has one side edge

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for receiving a marking characterizing the content of the vessel.

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10. (Amended) The device according to claim 9, wherein the vessel is comprised of polystyrene.

17. (Amended) The device according to claim 16, wherein the different luminophores include first and second luminophores, the first luminophores having a high fluorescence and low phosphorescence and the second luminophores having high phosphorescence and a low fluorescence.

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18. (Amended) The device according to claim 16, wherein the receiver detects the first reaction agents with a time delay such that the fluorescent rays from the first luminophores are recorded during the emission of the transmitting light pulses and the phosphorescent rays from the second luminophores are recorded during the transmitting breaks.

19. (Amended) The device according to claim 1, wherein the receiver is one of a photo-multiplier, a PIN detector, and an avalanche diode, and includes a polarization filter, a receiving optic, and an interference filter installed in front of the receiver.

Please add the following new claims:

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24. (New) A method for analyzing immunoassays with a liquid medium comprising:  
utilizing the device of claim 1; and  
operating the transmitter for transmitting light pulses in a pulsed mode, the pulsed mode having a pulse-break ratio, the pulse-break ratio being selected such that optically excited luminophores emit fluorescent rays during emission of a transmitting light pulse and emit phosphorescent rays during transmitting breaks.

25. (New) The method according to claim 24, further comprising:  
labeling two different reaction agents with different luminophores, wherein the first luminophores have a high fluorescence and low phosphorescence and the second luminophores have high phosphorescence and a low fluorescence.

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26. (New) The method according to claim 24, further comprising:  
detecting the first reaction agents with a time delay;  
recording fluorescent rays from first luminophores during the emission of the transmitting light pulses; and  
recording phosphorescent rays from second luminophores during the transmitting breaks.